JSC Photos by Andrew Patnesky, Karen Schmidt

Top to bottom, left to right. 1)The Gemini 7 spacecraft is seen from the hatch window of the Gemini 6 spacecraft during rendezvous and station keeping maneuvers at an altitude of approximately 160 miles on Dec. 15, 1965. 2) Former JSC Director Chris Kraft, left, talks with a reunion attendee. 3) Former Astronaut Buzz Aldrin, left, discusses reunion activities with coordinator Bob Legler of Rockwell. 4) Working together during the Gemini program in Mission Control from left are Flight Director Chris Kraft, Astronauts James McDivitt, Charlie Bassett and Buzz Aldrin.

Rendezvous Reunion

Gemini 6, 7 alumni come together to celebrate 30 years of space science

By Karen Schmidt

On Dec. 4, 1965, Gemini 7 became the first spacecraft to launch with a primary objective of meeting another spacecraft in orbit. Thirty years later, many who worked that first rendezvous mission came together to relive the eventful moment in space history.

Reunion participants agreed that without the experimentation and innovative solutions of the Gemini Program, many of the American space program's most memorable feats—from landing humans on the Moon to servicing the Hubble Space Telescope to docking shuttles with the Mir Space Station—would not have been possible.

"When you talk about Gemini, it certainly brings back all kinds of memories," said former JSC Director and Gemini Flight Director Chris Kraft. "It makes me remember the great things we accomplished together."

Kraft, along with more than 100 other Gemini veterans, remembered the days of the Manned Spacecraft Center earlier this month at a reunion at the Gilruth Center.

"Gemini holds a very fond place in my heart," Kraft said. "It was the last time I was an active flight director. It was a job I never wanted to leave. But younger and brighter men came along. It is always a marvelous time for me to come back and be amongst you. It brings back wonderful thoughts and memories of the times we had together. We were very fortunate people to have lived in the times that we did. Flying Mercury, Gemini and Apollo was quite a challenge to all of us and it was a marvelous feat. But the most wonderful part about it was the associations we had with the people."

Kraft recalled how difficult is was for the Gemini 7 astronauts—Commander Frank Borman and Pilot Jim Lovell. One of the major objectives of Gemini 7 beside the rendezvous was to test space suits and an unpressurized spacecraft for long duration flights to the Moon. Post-flight briefings revealed it was difficult for the astronauts to live 14 days in space suits in the small Gemini craft.

"I remember Lovell saying it was like spending 14 days in a men's room," Kraft said.

What scientists did discover was that astronauts could not live in pressurized suits during long-duration missions, but they could live in space without the suits, only needing them during launch and reentry.

Even with the difficulties, the first rendezvous took place five hours after Gemini 6 was launched on Dec. 15, 1965. Commander Wally Schirra and Pilot Tom Stafford maneuvered the Gemini 6 craft to within 120 feet of the Gemini 7 vehicle. Maneuvers continued for three and a half orbits when Gemini 6 performed a separation maneuver to distance the two space vehicles to about 30 miles from one another. Gemini 6 prepared for reentry while Gemini 7 began to set up to evaluate reentry guidance capabilities. While over in within minutes, the Gemini rendezvous provided the ground work for another rendezvous 30 years later between a space shuttle and a space station.

Former Astronaut Buzz Aldrin, who worked to define orbits to accomplish the rendezvous during Gemini, reflected on the variety of individuals that worked the Gemini Program.

"It was such an enjoyable time working with different people that were so much a part of those early definition days," Aldrin said. The second human to set foot on the Moon now brings his work into the future.

"Recently I've been working on things a little different than that," Aldrin said. Instead of a Delta-h (difference in height) of 10-15 miles, it's about 40 million miles. I'm using relative motion to do some circulating orbits between Earth and Mars."

Astronaut John Young reflected on how the Gemini program advanced the space program into Moon landings but could not have been accomplished with team work.

"Ten manned missions in 16 months, boy-oh-boy, it was fantastic," Young said. "I'm sure everyone can remember that we didn't have the foggiest notion of what we were doing, but we did it anyway and we did it fast. Without that experience we would still be trying to get to the moon. The Gemini program was great.

"It proved that we could take nothing and do something with it. It was a tremendous accomplishment throughout and everybody did a heck of a lot of good work," Young added.

Gemini proved to be a valuable stepping stone to the Moon by defining reentry and landing techniques, providing flight controllers and engineers with data on how to manage long duration missions, providing astronauts with microgravity, rendezvous and extravehicular experience and providing scientists with data on the effects of weightlessness to the human body.

"It was time we recognized the valuable work that was done on the Gemini Program," Legler said. ❑

Space task group member Dunseith dies

Retired Assistant to the JSC Director of Space Operations Lynwood C. Dunseith died last week.

Dunseith joined NASA in 1957 at Lewis Research Center, then moved to Langley Research Center to develop real-time mission support computer programs for Project Mercury as part of the Space Task Group.

He moved to Houston in 1962 as part of the STG, which formed the nucleus of the Manned Spacecraft Center, now JSC. Dunseith worked on mission planning and analysis and development and operation of the Mission Control Center's computer complex. He became chief of the Flight Support Division in 1967, assistant director for computation and flight support in 1970, deputy director of the Data Systems and Analysis Directorate in 1974, and director of that office in 1979.